

CROSS CURRENT CONTROL FOR POWER CONVERTER SYSTEMS AND INTEGRATED MAGNETIC CHOKE ASSEMBLY

Abstract of Disclosure

A cross current control system for multiple, parallel-coupled power converters includes common mode chokes, local cross current feedback controllers, and local converter controllers. Each common mode choke is coupled to a respective power converter. Each local cross current feedback controller is configured for receiving common mode cross currents from a respective local cross current detector, calculating a resultant cross current, and generating a local feedback control signal. Each local converter controller is configured for using a respective local feedback control signal to drive the respective power converter in accordance with a coordinated switching pattern. An integral choke assembly includes a common mode choke and a differential mode choke with common and differential mode choke cores configured with at least one magnetic flux path being shared by magnetic flux generated by common mode coils and differential mode coils.

Figures